



# MARINE MAMMAL COMMISSION

25 February 2020

Dr. Zachary Schakner  
Protected Species Science Branch  
Office of Science and Technology  
National Marine Fisheries Service  
1315 East-West Highway  
Silver Spring, MD 20910-3226

ATTN: Stock Assessments, NOAA–NMFS–2019–0090

Dear Dr. Schakner:

The Marine Mammal Commission (the Commission), in consultation with its Committee of Scientific Advisors on Marine Mammals, has reviewed the National Marine Fisheries Service (NMFS) 2019 draft stock assessment reports (SARs) for marine mammals occurring in U.S. waters (84 Fed. Reg. 65353). These reports provide valuable information needed to understand and address important marine mammal conservation issues. The Commission appreciates NMFS's efforts to update and improve these reports, as well as the opportunity to review them, provide comments, and recommend further improvements. The Commission is providing general comments on meeting the Marine Mammal Protection Act (MMPA) requirements pertaining to preparing SARs as well as comments specific to different regions and stocks.

## GENERAL COMMENTS

### Requirements of section 117

*Meeting basic requirements*—As described in the Commission's letter on the draft 2018 SARs and several recent reviews<sup>1</sup>, the Commission continues to be concerned about NMFS's performance in meeting several of the requirements of Section 117 of the MMPA. That provision requires inclusion of a minimum population estimate ( $N_{\min}$ ), a key factor for effective management of marine mammal stocks using potential biological removal (PBR). Without an  $N_{\min}$  derived from recent<sup>2</sup> data, PBR cannot be calculated and is considered "unknown," which is useless for management purposes. Including the revised 2019 draft SARs, an  $N_{\min}$  estimate is lacking for 86 of the 252 identified stocks (or 34%). The Commission understands that a lack of resources (mainly access to vessel and aerial platforms from which surveys are conducted) is the primary hindrance to full assessment of all stocks. Nevertheless, the lack of data for over one third of the stocks recognized<sup>3</sup> by NMFS is a serious shortcoming in meeting statutory obligations. The Commission appreciates the efforts NMFS has made to address this shortcoming by setting priorities across regions, coordinating requests for vessel time, and maximizing the data collected during these surveys (e.g. Ballance et al.

---

<sup>1</sup> [Full 2016 report](#), [summary 2016 report](#), and [updated 2018 report](#)

<sup>2</sup> NMFS's Guidelines for Assessing Marine Mammal Stocks defines recent as within the last eight years.

<sup>3</sup> There are additional stocks, primarily in the Pacific Islands, for which information is lacking and SARs have yet to be created.

2017). The Commission reiterates its recommendation that NMFS continue its efforts to prioritize and coordinate requests to secure the necessary survey resources across regions. In addition to these internal efforts, the Commission acknowledges and encourages NMFS's continued engagement and collaboration with other federal agencies that also require basic information on marine mammal stocks, through programs like the Atlantic Marine Assessment Program for Protected Species<sup>4</sup> and similar programs in the Gulf of Mexico<sup>5</sup> and the Pacific<sup>6</sup>. Further, the Commission also reiterates its recommendation that these marine assessment programs continue to include appropriate personnel, logistical capability, and vessel time to allow for photo-identification, biopsy sampling, satellite tagging and other efforts to augment and increase the value of the core line-transect survey data collected. These additional efforts will assist in delineating stock structure, confirming at-sea identification of cryptic species, and furthering understanding of marine mammal distribution, habitat use, and behavior, all of which are important for reaching the overall management goals of NMFS under the MMPA.

## SPECIFIC COMMENTS

### Atlantic

*Estimating cryptic mortality, Gulf of Maine humpback whales and North Atlantic right whales*—The Commission is encouraged to see NMFS considering an approach for estimating cryptic mortality and incorporating the caveat within the “Status of the Stock” section of the SARs that, for example, observed mortality and serious injury estimates may account for only 20% of total estimated mortality for the Gulf of Maine stock of humpback whales. The Commission commends the agency's efforts to develop methods for estimating undetected mortality and its recognition that mortality estimates consisting only of observed deaths are biased low, a bias that all too frequently affects the assessed status of the stock. However, the Commission recommends that NMFS explain its methodology and reasoning in a peer-reviewed publication prior to including estimates of cryptic mortality in the SARs. The Commission also encourages NMFS to continue developing ways to summarize the uncertainties underlying mortality and serious injury (M&SI) data after discussions with the Atlantic Large Whale Take Reduction Team and peer review.

*“Undifferentiated beaked whales”*—Several SARs for beaked whales in the North Atlantic were updated in 2019. Although a PBR cannot be calculated for individual stocks, each of these SARs includes a best estimate of abundance,  $N_{min}$ , and PBR calculated for “undifferentiated beaked whales,” which includes four species of *Mesoplodon* and *Ziphius cavirostris*. In many areas of the world where long-term studies occur, photo-identification of individuals indicates some level of site-fidelity (e.g., Baird 2019, Dinis et al. 2017, Forney et al. 2017, McSweeney et al. 2007), suggesting that many of these species have complex population structure. Designating a single “western North Atlantic stock” for each species may not reflect their stock structure. This shortcoming is compounded when abundance and PBR are reported for “undifferentiated beaked whales,” combining all five species. While the Commission is encouraged to see NMFS making efforts to obtain accurate species identifications at-sea (particularly through techniques such as eDNA, photo-documentation, unmanned aerial vehicles, and acoustic monitoring), the Commission recommends that NMFS reconsider whether including an abundance estimate,  $N_{min}$ , and PBR for “undifferentiated beaked

---

<sup>4</sup> <https://www.nefsc.noaa.gov/psb/AMAPPS/>

<sup>5</sup> <https://www.boem.gov/GOMMAPPS/>

<sup>6</sup> <https://swfsc.noaa.gov/textblock.aspx?Division=PRD&ParentMenuId=276&id=22316>

whales” is meaningful for effective management of these stocks and revise the SARs accordingly if appropriate. Part of this evaluation should consider how the data are likely to be used by those who rely on and cite the information provided in the SARs.

## **Alaska**

*Alaska Native subsistence takes*—Accurate information on the taking of marine mammals by Alaska Natives for subsistence and handicraft purposes is becoming increasingly important in light of the pace of climate changes in the Arctic and sub-Arctic regions. Over the past decade, the Commission has repeatedly recommended that NMFS, in collaboration with its co-management partners, improve its monitoring and reporting of subsistence hunting in Alaska. While there have been improvements in the number of communities reporting take levels for some ice seals in the SARs in recent years, the majority of communities that hunt or may hunt ice seals are still unaccounted for. Therefore, the Commission continues to recommend that NMFS pursue additional mechanisms to gather reliable information on the numbers of marine mammals taken for subsistence and creating handicrafts, including by securing adequate funding for comprehensive surveys of subsistence use and Native hunting effort. At a minimum, the Commission encourages NMFS to consider statistical methods (e.g. Nelson et al. 2019) that could provide a more complete assessment of take levels from subsistence hunting. Further, the Commission encourages NMFS to continue to provide updated information in the SARs whenever it becomes available, even if it pertains only to a limited number of villages or a subset of years. The Commission would welcome the opportunity to meet with NMFS to discuss progress, next steps, and any impediments to including more comprehensive data on take levels by Alaska Natives in future SARs.

*Harbor porpoise, Southeast Alaska stock*—In its comment letter on the draft 2018 SARs, the Commission noted that NMFS’s best estimate of M&SI for the Southeast Alaska (SEAK) harbor porpoise stock was three times greater than the stock’s PBR, and urged NMFS to continue to address this disparity. The Commission appreciates that NMFS has prioritized research on, and monitoring of, this stock. However, the Commission believes that more effort is required in three areas: management planning, fisheries monitoring, and mitigation.

The Commission recommended that, under the requirements of the MMPA, NMFS form a take reduction team (TRT) to address the high level of incidental take by SEAK gillnet fisheries from this stock relative to PBR. NMFS responded that the MMPA allows the agency to “prioritize [its TRT efforts] based on availability of funding and [that it is] currently implementing several other TRTs that address higher priority stocks and fisheries where the TRPs are not yet meeting MMPA goals (e.g., ESA-listed North Atlantic right whales, Hawaii pelagic false killer whales, and Northern and Southern North Carolina Estuarine System bottlenose dolphins).” While the Commission is aware of this constraint and supports the allocation of funding to these TRTs as a priority, it notes that several other TRTs (Atlantic Trawl Gear, Harbor Porpoise (Atlantic), Pacific Offshore Cetacean, and Pelagic Longline) that were very active at times in the past are now meeting infrequently and often only via webinar, which suggests that funds might be available to establish a new TRT. The data reported in the draft 2019 SAR include a minimum estimated mean annual U.S. commercial fishery-related mortality and serious injury rate (34 porpoises) that exceeds the PBR (12) by nearly threefold. Given the small population size and an M&SI level that significantly exceeds the PBR for this stock, the Commission recommends that NMFS reconsider its funding priorities and establish a Southeast Alaska harbor porpoise TRT as part of the development of a take reduction plan to address bycatch of SEAK harbor porpoises by gillnet fisheries.

In its 2018 letter, the Commission highlighted sources of uncertainty in the data used to assess the status of and threats to SEAK harbor porpoises, and urged NMFS to continue its research and monitoring effort to address the issue. The Commission appreciates the important strides that NMFS has made in the last year with the 2019 harbor porpoise survey that covered much of the range of the SEAK stock. The DNA samples collected will help determine whether the SEAK stock is composed of one or two populations, and the new data will significantly improve our understanding of the status of the stock(s). However, substantial uncertainty remains concerning the magnitude of the bycatch threat. What is known comes from an incomplete bycatch survey conducted by fisheries observers in 2012 and 2013. The Commission has urged NMFS to increase observer coverage of gillnet fisheries in Alaska, but so far, to little effect, primarily because priority shifts by NMFS defunded the Alaska Marine Mammal Observer Program (AMMOP), which produced the 2012-2013 bycatch estimates. The Commission is encouraged by the 2019 survey and the data it provided to inform abundance estimates, stock structure, and the development of a fisheries monitoring plan. The Commission recommends that data collected during these surveys, along with fishing effort data, be used to identify areas for timely implementation of a fisheries observer program, in coordination with the State of Alaska. The fisheries of most interest and concern are those with the greatest overlap between gillnets and harbor porpoises in Southeast Alaska.

NMFS, in its response to the Commission's 2018 letter, pointed out that TRTs require a minimum amount of data and analyses to support TRT deliberations, and that it was working to gather the requisite data and analyses. The Commission recommends that NMFS provide a timeline for acquiring these data and analyses, and an anticipated date for the initiation of a SEAK harbor porpoise TRT. The Commission recognizes that NMFS may lack the data and analyses typically needed to support a new TRT. However, the problem of harbor porpoise entanglement in gillnets is common and well-studied in many parts of the Northern Hemisphere and it is well established that gillnet fisheries often represent a significant threat to harbor porpoise populations (see references in Reeves et al. 2013). It is widely recognized that wherever harbor porpoises and such fisheries co-occur, there will be entanglements. The use of pingers to deter harbor porpoises from gillnets has been widely implemented, in most cases with considerable success (e.g., Kraus et al. 1997, Gearin et al. 1999, Trippel et al. 1999, Gönener & Bilgin 2009, Carlström et al. 2009, Dawson et al. 2013, Orphanides and Palka 2013, Larsen and Eigaard 2014, Zaharieva et al. 2019). Only in a few cases were pingers found to be ineffective at reducing harbor porpoise bycatch in gillnets. In some fisheries with harbor porpoise bycatch, the use of pingers is mandatory (e.g., New England and throughout the European Union). Thus, experience throughout the species' range suggests that where gillnets are used, bycatch is to be expected and the use of pingers will likely reduce the bycatch rate significantly. Therefore, in the absence of TRT-mediated development of a take reduction plan, the Commission recommends that NMFS adopt a parsimonious approach, and initiate the necessary information gathering and consultation necessary to promulgate regulations that would require the use of pingers by SEAK gillnet fisheries.

The Commission appreciates the opportunity to provide comments and recommendations on the 2019 draft SARs. Please contact me if you have any questions regarding the Commission's rationale or recommendations.

Sincerely,



Peter O. Thomas, Ph.D.,  
Executive Director

cc: Genevieve Nesslage, Chair Atlantic Scientific Review Group  
Megan Peterson, Acting co-Chair Alaska Scientific Review Group  
Greg O'Corry-Crowe, Acting co-Chair Alaska Scientific Review Group  
John Calambokidis, Chair Pacific Scientific Review Group

## References

- Baird R.W. 2019. Behavior and Ecology of Not-So-Social Odontocetes: Cuvier's and Blainville's Beaked Whales. In: Würsig B. (eds) *Ethology and Behavioral Ecology of Odontocetes. (Ethology and Behavioral Ecology of Marine Mammals)*. Springer, Cham, 504 p.
- Ballance, L., M. Srinivasan, A. Henry, R. Angliss, L. Barre, J. Barlow, J. Bengtson, S. Bettridge, J. Bohnsack, S. K. Brown, P. Clapham, C. Fahy, M. Ford, L. Garrison, T. Gerrodette, N. LeBoeuf, J. Moore, E. Oleson, D. Palka, F. Parrish, J. Redfern, J. Simpkins, B. Taylor, and P. Wade. 2017. A strategic plan for conducting large geographic scale, ship-based surveys to support the U.S. Marine Mammal Protection and Endangered Species Acts. NOAA Tech. Memo. NMFS-F/SPO-169, 20 p.
- Carlström, J., P. Berggren, and N.J. Tregenza. 2009. Spatial and temporal impact of pingers on porpoises. *Canadian Journal of Fisheries and Aquatic Sciences* 66(1):72-82.
- Dawson, S.M., S. Northridge, D. Waples, and A.J. Read. 2013. To ping or not to ping: the use of active acoustic devices in mitigating interactions between small cetaceans and gillnet fisheries. *Endangered Species Research* 19:201–221.
- Dinis, A., R. Marques, L. Dias, D. Sousa, C. Gomes, N. Abreu, and F. Alves. 2017. Site fidelity of Blainville's beaked whale (*Mesoplodon densirostris*) off Madeira Island (Northeast Atlantic). *Aquatic Mammals* 43(4):387-390.
- Forney, K.A., B.L. Southhall, E. Slooten, S. Dawson, A.J. Read, R.W. Baird, and R.L. Brownell, Jr. 2017. Nowhere to go: noise impact assessments for marine mammal populations with high site fidelity. *Endangered Species Research* 32: 391–413.
- Gearin P.J., M.E. Gosho, J.L. Laake, L. Cooke, R.L. DeLong, and K.M. Hughes. 1999. Experimental testing of acoustic alarms (pingers) to reduce bycatch of harbor porpoise, *Phocoena*, in Washington State. *Journal of Cetacean Research and Management* 2:1-9.
- Gönener S., and S. Bilgin. 2009. The effect of pingers on harbour porpoise, *Phocoena*, bycatch and fishing effort in the turbot gill net fishery in the Turkish Black Sea coast. *Turkish Journal of Fisheries and Aquatic Science* 9:151–157.
- Kraus S.D., S.J. Read, A. Solow, K. Baldwin, T. Spradlin, E. Anderson, J. Williamson. 1997. Acoustic alarms reduce porpoise mortality. *Nature* 388: 525

- Larsen, F., and O.R. Eigaard. 2014. Acoustic alarms reduce bycatch of harbour porpoises in Danish North Sea gillnet fisheries. *Fisheries Research* 153:108-112.
- McSweeney, D. J., S. D. Mahaffy, and R. W. Baird. 2007. Site fidelity, associations and movements of Cuvier's (*Ziphius cavirostris*) and Blainville's (*Mesoplodon densirostris*) off the Island of Hawaii. *Marine Mammal Science* 23(3), 666-687.
- Nelson M.A., L.T. Quakenbush, B.D. Taras, Ice Seal Committee (2019) Subsistence harvest of ringed, bearded, spotted, and ribbon seals in Alaska is sustainable. *Endangered Species Research* 40:1-16.
- Orphanides C.D., and D.L. Palka. 2013. Analysis of harbor porpoise gillnet bycatch, compliance, and enforcement trends in the US northwestern Atlantic, January 1999 to May 2010. *Endangered Species Research* 20:251-269.
- Reeves, R.R., K. McClellan and T.B. Werner. 2013. Marine mammal bycatch in gillnet and other entangling net fisheries, 1990 to 2011. *Endangered Species Research* 20(1):71-97.
- Trippel E.A., M.B. Strong, J.M. Terhune, and J.D. Conway. 1999. Mitigation of harbour porpoise (*Phocoena phocoena*) bycatch in the gillnet fishery in the lower Bay of Fundy. *Canadian Journal of Fisheries and Aquatic Sciences* 56:113-123.
- Zaharieva, Z., N. Yordanov, V. Racheva, and V. Delovi. 2019. The effect of pingers on cetaceans bycatch and target catch in the turbot gillnets in Bulgarian Black Sea. *ZoolNotes* 150:1-4.